

STUDY comparing the “ergogenic” performance effects after 8 weeks of daily caffeine use compared to a placebo, and also the effects after a one week “washout” and the use of caffeine again compared to the first test.

<https://bartoll.se/2025/04/caffeine-daily-use-damage/>

What’s the Study About?

Scientists wanted to see if drinking caffeine every day hurts your body’s ability to get a “boost” from it over time. They tested whether daily caffeine use damages your energy systems instead of just making you “used to it” (like how you get used to a loud noise).

Who Was in the Study?

- **73 college guys** who didn’t exercise much.
- They barely drank caffeine before the study (less than 25 mg/day—about ¼ cup of coffee).

What Did They Do?

1. **Split into Two Groups:**
 - **Group 1:** Took caffeine pills daily (3 mg per kilogram of body weight). For a 165-pound guy, that’s like two cups of coffee a day.
 - **Group 2:** Took fake pills (placebo) with no caffeine.
2. **Testing Their Performance:**
 - **First Tests:** After 8 weeks, everyone did a 3-kilometer run and a bike sprint test (called the Wingate test) to measure speed and power.
 - **Second Tests:** After a 1-week break (no caffeine for anyone), they repeated the tests.

What Happened?

- **Daily Caffeine Group:** After 8 weeks, caffeine didn’t help them as much as it did at the start. Their running and biking performance improved less than expected.
- **After the Break:** Both groups reacted the same way to caffeine again. The daily users’ bodies “recovered” a bit during the caffeine-free week.

What Does This Prove?

- **Not “Tolerance”:** The drop in performance wasn’t because their bodies got “used to” caffeine.
- **Damage Over Time:** Daily caffeine stressed their adrenal glands (the organs that release adrenaline). Think of it like revving a car engine nonstop—it eventually wears out.

Why Does This Matter?

The study shows that even “safe” caffeine doses (like two cups of coffee) can quietly harm your body’s stress systems if you use them daily. It’s like hitting the panic button too often—your body stops responding as well because it’s tired, not because it’s “used to it.”

Key Takeaway for a 10th Grader:

If you drink caffeine every day, your body doesn’t just ignore it—it gets worn out. The study proves that daily use isn’t harmless, even if it feels like it’s not working as well anymore.

Source: Joachim Bartoll’s analysis of the study in “The Accumulated Damage From Daily Caffeine Use” (2025).